Advanced Web Kit Development

Session 129

These are confidential sessions—please refrain from filming or taking pictures.

Application Technologies

Advanced Web Kit Development

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http://developer.apple.com/wwdc2005/

Introduction

http://developer.apple.com/wwdc2005/

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COMPX 2023.53 2.91
AAPL 30.35 0.54
MSFT 26.60 0.17
PIXR 67.72 0.67
AMZN 51.94 0.18
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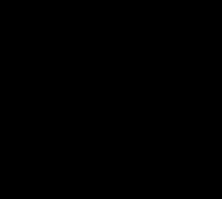
Package Tracker
ups
eBay wine hutch
french tickler
DATE TIME LOCATION ACTIVITY

Web Kit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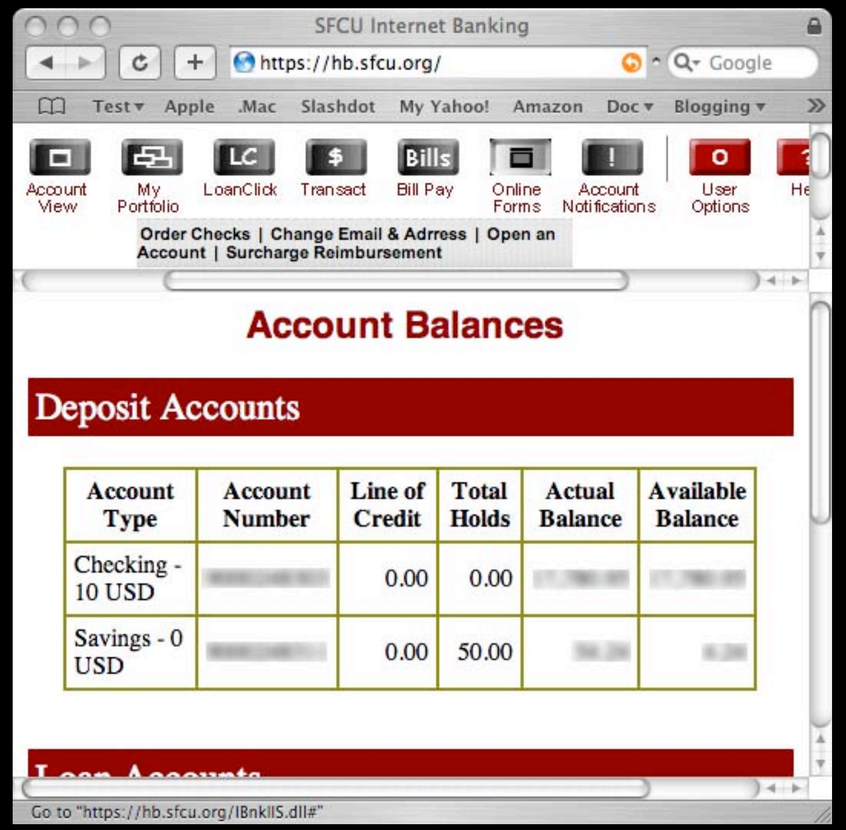
It’s not just about browsing

Browser Hosted Apps

User Interface: HTML/CSS/JavaScript

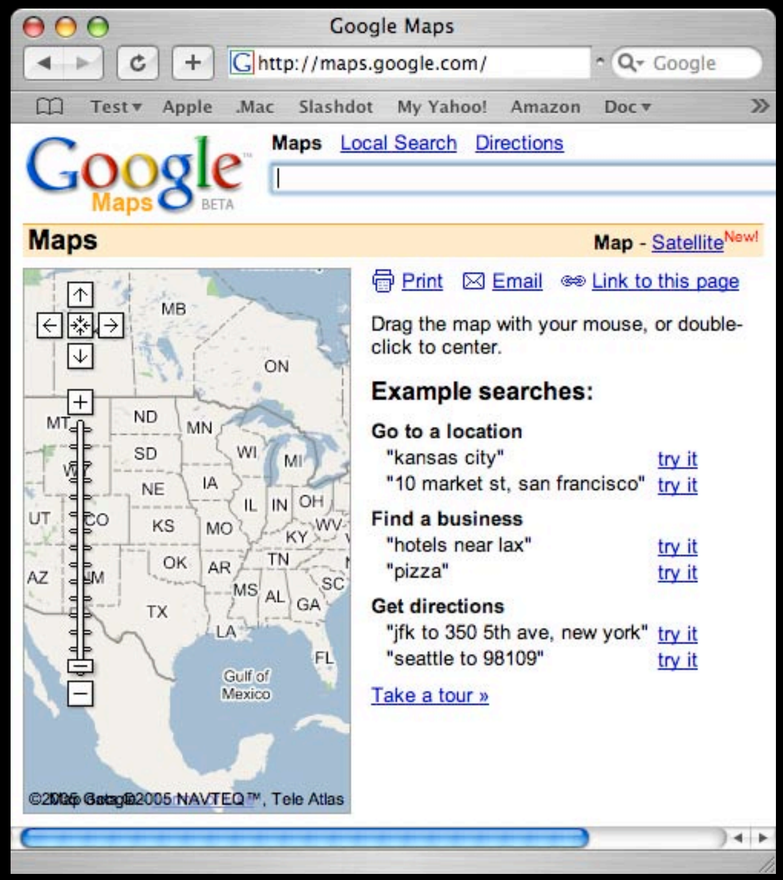
Server Generated Content



Browser Hosted Apps

User Interface: HTML/CSS + JavaScript/ XMLHTTPRequest (a.k.a. AJAX)

Server Application Logic

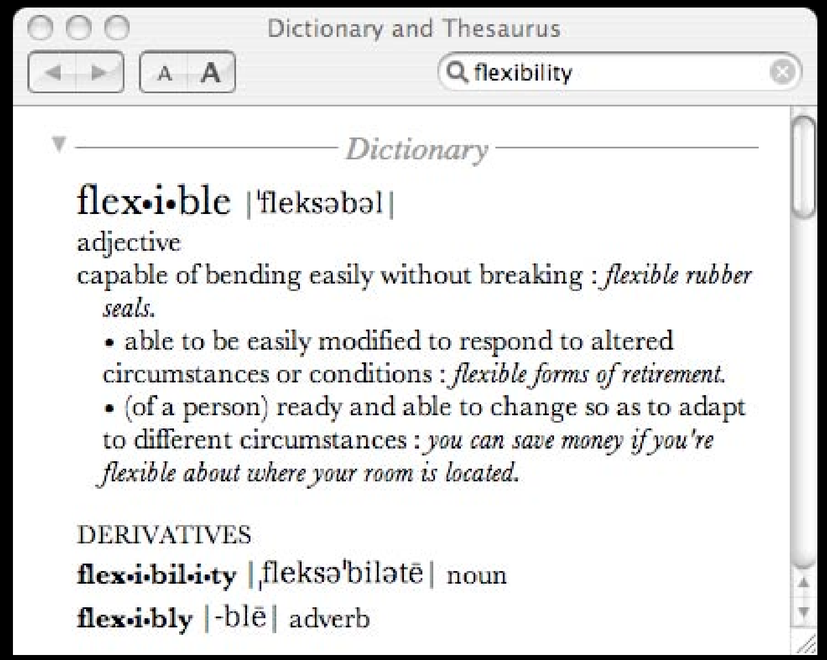


The same technologies used for browser hosted applications can be used for desktop applications.

Apps

User Interface: HTML/CSS/JavaScript + GUI Toolkit

Client Generated Content



Apps

User Interface: HTML/CSS + JavaScript/ XMLHTTPRequest (a.k.a. AJAX)

Server Application Logic

Why?

- Easy to iterate
- Easy to leverage rich media types
- Powerful layout
- Leverage design skills from web
- Easy to style

…But, But

- HTML doesn’t do what I want
- I can’t access native code
- It’s too hard to write a plug-in
- JavaScript isn’t as fast as compiled code

Wrong!

How?

- Use Web Kit
- Extend and enhance where necessary
  - Custom rendering with plug-ins
  - Powerful DOM API
  - Extend JavaScript
  - Native code for speed, if necessary

What You'll Learn

- Three specific technologies
  1. Web Kit plug-ins
  2. Scripting with the Objective-C/JavaScript binding
  3. DOM Objective-C binding

Web Kit Plug-ins

- Easy to implement
- Cocoa bundle
- Just like any other NSView
- Scriptable

Web Kit Plug-ins

- Bundle principal class must implement

```
+ (NSView *)plugInViewWithArguments:(NSDictionary *)arguments;
```

- “arguments” example:

```
{
    WebPlugInAttributesKey = {
            height = 479;
            width = 382;
            src = Images/10066537.jpg;
            type = image/x-transitionimage;
            id = framedImage;
     };
    WebPlugInContainerKey = <WebPluginController: 0x816f940>;
    WebPlugInBaseURLKey = http://midden.apple.com/test.html
}
```

Web Kit Plug-ins

- Life cycle methods

```
- (void)webPlugInInitialize;
- (void)webPlugInStart;
- (void)webPlugInStop;
- (void)webPlugInDestroy;
```

- Scripting

```
- (id)objectForWebScript;
```

- Misc.

```
- (void)webPlugInSetIsSelected:(BOOL)isSelected;
```

Scripting

- From Objective-C to JavaScript

```
@interface WebScriptObject : NSObject
```

- From JavaScript to Objective-C

```
@interface NSObject (WebScripting)
```

- See WebScriptObject.h

Demo

Web Kit Plug-in

http://developer.apple.com/wwdc2005/

Objective-C DOM API

- Direct access to document DOM from Objective-C
- Names are based on W3C standard
  - IDL Definition
    - Node getNamedItemNS(in DOMString namespaceURI, in DOMString localName);
  - C
    - Node getNamedItemNS(const DOMString &namespaceURI, const DOMString &localName) const;
  - ObjectiveC
    - - (DOMNode *)getNamedItemNS:(NSString *)namespaceURI :(NSString *) localName;
- Use for convenience or when high performance in needed

Demo

Objective-C DOM API

http://developer.apple.com/wwdc2005/

What You've Learned

- Three specific technologies
  1. Web Kit plug-ins
  2. Scripting with the Objective-C/JavaScript binding
  3. DOM Objective-C binding

More Information

http://developer.apple.com/wwdc2005/

Documentation, Sample Code, and Other Resources

http://developer.apple.com/wwdc2005/

Related Sessions

Safari for Web Designers	Session 135 Thursday 2:00PM
Hands On: Advanced Dashboard Widgets	Session 134 Thursday 2:00PM

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